Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte JOHN A. HEALY and CRAIG WOJCIESZAK

Appeal No. 2002-0955
Application No. 09/511,921

ON BRIEF

Before ABRAMS, STAAB and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 3-5, 8, 10-18, 21 and 23-31. Claims 19 and 20, the only other claims pending in the application, stand withdrawn from consideration as being directed to a non-elected species. Appellants are appealing the rejections of claims 4, 5, 13-15, 17, 21 and 23-31 only. The amendments (Paper Nos. 8 and 11) filed subsequent to the final rejection have not been entered.

We AFFIRM-IN-PART.

BACKGROUND

The appellants' invention relates to athletic shoes having shock-absorbing soles for use with rigorous activities such as running or court sports (specification, page 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

The examiner relied upon the following prior art references of record in rejecting the appealed claims:

Norton et al. (Norton)	4,730,402	Mar. 15, 1988
Kilgore et al. (Kilgore)	5,343,639	Sep. 6, 1994
Luthi et al. (Luthi)	5,461,800	Oct. 31, 1995

The following rejections are before us for review.

(1) Claims 4, 5, 17, 21 and 23-31[1] stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kilgore.

(2) Claims 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kilgore in view of Norton.

(3) Claims 4, 5, 13-15, 21, 23-26 and 28-30[2] stand rejected under 35 U.S.C. § 102(b) as being anticipated by Luthi.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 14) for the examiner's complete reasoning in support of the rejections and to

[1] Appellants are not appealing the rejection of claims 1, 3, 8, 10-12, 16 and 18.

[2] Appellants are not appealing the rejection of claims 1 and 8.

the brief and reply brief (Paper Nos. 13 and 15) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Rejection (1)

Kilgore discloses a shoe comprising, inter alia, a midsole having upper and lower plates 28, 30 and a plurality of compliant elastomeric support elements 32, 132, 232, 332 disposed in an open area defined between the plates. With respect to claims 4, 21 and 24, which call for one or more shock-absorber elements being "generally ellipsoidal in shape," the examiner takes the position that the "barrel-shaped" (see column 14, lines 36-42) support elements 332 illustrated in Figures 9*e* and 9*f* are "generally ellipsoidal in shape."

Both the examiner and appellants agree that the definition of an ellipsoid is "a geometric surface, all of whose plane sections are either ellipses or circles" (see brief, page 10, and answer, page 6). The issue in dispute, however, is what is meant by the claim terminology "generally ellipsoidal" used in claims 4, 21 and 24. Appellants point out on page 10 of their brief that not all plane sections taken through the barrel-shaped support elements 332 of Kilgore are either ellipses or circles. From our observation,

Kilgore's support elements 332 differ from an "ellipsoidal" shape by virtue of the flattenings on top and bottom and the central top and bottom recesses. The terminology "generally ellipsoidal," however, encompasses not only ellipsoidal shapes but also shapes which are close to ellipsoidal but differ to some degree from ellipsoidal. Thus, the dispositive issue in the appeal of the rejection of claims 4, 21 and 24 is whether these differences are of such a nature that Kilgore's support elements 332 cannot reasonably be considered "generally ellipsoidal in shape." For the reasons which follow, we agree with the examiner that the claim terminology "generally ellipsoidal in shape" as used by appellants is sufficiently broad to encompass the shape of Kilgore's support elements 332.

Consistent with Seattle Box Company, Inc. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1984), we look to appellants' specification to see what is meant by "generally ellipsoidal." With regard to this shape limitation, appellants' specification (page 6) informs us that

> [t]he geometry of the shock-absorber elements 44 is also important. The vertical and shear forces applied to the shock-absorber elements 44 during use of an athletic shoe often exceed twice the wearer's body weight. Therefore, the shape is preferably conducive to resisting these forces. Shapes that allow the shock-absorber elements 44 to bend or kink are undesirable, as bending or kinking would reduce the resiliency and energy return of the system. Preferably, each shock-absorber element 44 in horizontal cross-section is generally circular in shape. More preferably, each shock-absorber element 44 is generally ellipsoidal in shape and more preferably is generally spherical in shape. A sphere or ball-shaped shock-absorber element 44 provide improved response to vertical and shear loading. The sphere will not

> bend or kink, but rather will deform until the load is removed at which time it will return to its original spherical shape.

We find nothing in this discussion which would lead one of ordinary skill in the art to understand that some degree of flattening or recesses in an otherwise ellipsoidal shape would preclude that shape from being considered "generally ellipsoidal."[3] We thus conclude that Kilgore's support elements 332, which are ellipsoidal in shape with the exception of the upper and lower flattenings and the recesses therein, meet the limitation "generally ellipsoidal in shape" of claims 4, 21 and 24.

The "generally ellipsoidal in shape" limitation being the only limitation in claims 4, 21 and 24 which appellants argue is not met by Kilgore, we shall sustain the examiner's rejection of these claims as being anticipated[4] by Kilgore. In that appellants have chosen not to argue the patentability of claim 25 apart from claim 24, claim 25 is treated as standing or falling with claims 4, 21 and 24. See In re Young, 927 F.2d 588, 590, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991); In re Wood, 582 F.2d 638, 642, 199 USPQ 137,

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[3] It is worthy of note that our determination with regard to the meaning of "generally ellipsoidal" is based in no part on the examiner's observation on page 7 of the answer that appellants' shock-absorber elements 44 have a flat top and bottom. We appreciate appellants' point, on page 2 of the reply brief, that, as illustrated in Figure 4, appellants' elements 44 have spherical, not flattened contours, the upper and lower portions of which are to some extent concealed by the sockets 54 in Figure 1.

[4] Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). It is not necessary that the reference teach what the subject application teaches, but only that the claim read on something disclosed in the reference, i.e., that all of the limitations in the claim be found in or fully met by the reference. Kalman v. Kimberly Clark Corp., 713 F.2d 760, 772, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984).

140 (CCPA 1978). Thus, we also sustain the rejection of claim 25 as being anticipated by Kilgore.

We shall not, however, sustain the examiner's rejection of claims 5 and 23 as being anticipated by Kilgore. From our perspective, one of ordinary skill in the art would simply not reasonably consider the barrel-shaped support elements 332 of Kilgore's Figures 9*e* and 9*f*, or any of the other embodiments of support elements disclosed by Kilgore, to be "generally spherical."

We shall not sustain the examiner's rejection of claim 17 as being anticipated by Kilgore. The examiner's position that the foam webs 238 in the support element 232 illustrated in Kilgore's Figures 9*c* and 9*d* are a tension member extending through one of the shock-absorber elements, as called for in claim 17, is unreasonable. As pointed out by appellants (brief, page 12), the web portions 238 cannot be construed as a member extending through the foam column 232, because the web portions are themselves part of the foam column.

As to claims 26 and 28, the examiner asserts that the foam webs 238 of Kilgore's support element 232 are inherently capable of performing the function of providing no resistance to compressive forces when placed in compression and no resistance of movement of the force distribution plates toward one another, so as to meet the limitation of the tension member being "adapted and configured" to perform these functions. As pointed out by appellants on page 14 of their brief, however, the foam webs 238 are part of the foam column 232 itself and thus contribute to its

stiffness; if a compressive force is applied to Kilgore's upper and lower plates 28, 30, in a manner to move the plates toward one another, the entirety of the foam column 232 resists compression and thus resists such movement of the plates. Moreover, we see no other structure in Kilgore's shoe which appears capable of meeting the requirements of the tension member called for in claims 26 and 28. We thus conclude that the subject matter of these claims is not anticipated by Kilgore and shall not sustain rejection (1) as to claims 26 and 28 or claims 29-31 which depend from claim 28.

Claim 27 calls for the shock-absorber element to include a through bore and wherein the tension member extends through the bore. The examiner's attempt to read the tension member on the webs 238 of Kilgore's support element 232 and to characterize the support element 232 as including a through bore is unreasonable. While the support element 232 does include upper and lower recesses extending partway into the foam column and separated by the webs 238, we see no through bore (bore extending through the element 232) in the element 232. Thus, we shall not sustain rejection (1) as to claim 27.

Rejection (2)

Turning now to the rejection of claims 13 and 14 as being unpatentable over Kilgore in view of Norton, the examiner (answer, page 6) has determined that Kilgore discloses a shoe meeting all of the limitations of these claims with the exception of the shock-absorber element on the medial side being stiffer than the ones on the lateral side and appellants have not challenged this determination. While Kilgore broadly

teaches providing the support elements with various heights, positions or densities to tune the cushioning of the shoe to a desired level of stiffness for a selected range of forces while providing maximum rearfoot control (see, e.g., column 10, lines 20-22, and column 11, lines 6-15), Kilgore does not specifically teach positioning of the support elements or varying their densities, and thus stiffness, so that the medial side of the sole is stiffer than the lateral side. Norton, however, does provide a motivation, namely, improved motion control and reduced compression for an individual that tends to pronate or hyperpronate (column 6, lines 42-48), for tuning Kilgore's support elements such that the medial side of the sole is stiffer than the lateral side thereof. We thus find reasonable the examiner's determination with respect to the combination of Kilgore and Norton. In that appellants' only argument with respect to the patentability of claims 13 and 14 over the applied prior art is lack of motivation to combine the references as proposed by the examiner (brief, pages 20-21) and we find such motivation, as discussed above, we shall sustain the examiner's rejection of claims 13 and 14 as being unpatentable over Kilgore in view of Norton.

Rejection (3)

We shall not sustain the examiner's rejection of claims 4, 21 and 24, or claims 5, 23, 25 and 26 which depend therefrom, as being anticipated by Luthi. Simply stated, the examiner's attempt to read the shock-absorber elements being "generally ellipsoidal in shape" (or "generally spherical in shape" as in claims 5 and 23) limitation of these claims on Luthi's heel tubes 26 is unreasonable on its face. Luthi's heel tubes 26 do

not even remotely resemble ellipsoids or spheres and thus are not "generally ellipsoidal" or "generally spherical" in shape.

As for claim 28, the examiner's position, as expressed on page 5 of the answer, that the plates on one side of Luthi's shoe can be compressed on one side and the tension member (heel tube) on the other side will not resist movement of the force distribution plates toward one another, thus responding to the "adapted and configured so as not to resist movement of the force distribution plates toward one another when the sole is compressed in a manner to move the force distribution plates toward one another" language of claim 28, is untenable. As explained by Luthi in column 5, lines 8-10, the heel tubes 26 "have the characteristics of springs and therefore have a measurable spring constant." As such, they inherently provide some resistance to movement of the upper and lower plates (surfaces 16, 18) toward one another, regardless of the point of application of force of the plates toward one another. Thus, we shall not sustain rejection (3) as to claim 28 or claims 29 and 30 which depend from claim 28.

We shall, however, sustain the rejection of claims 13-15 as being anticipated by Luthi. The only argument proffered by appellants (see brief, pages 16-17) as to why the subject matter of these claims is not anticipated by Luthi is that the tubular portions of the Luthi midsole are not "discrete" as required by claims 13-15. The "discrete" limitation to which appellants refer is found in claim 1, from which each of claims 13-15 ultimately depends. Specifically, claim 1 calls for "at least two discrete resilient shock-

absorber elements." In that, in the embodiment illustrated in Luthi's Figure 4, the heel tubes 26 in the lateral leg 36 are discrete (i.e., separate and distinct[5]) from the heel tubes 26 in the medial leg 34 of the midsole, we find ourselves in agreement with the examiner that Luthi meets the claim limitation "at least two discrete resilient shock-absorber elements."[6] Accordingly, appellants' argument does not persuade us that Luthi's shoe fails to anticipate the subject matter of claims 13-15.

[5] Note the definition of "discrete" in Webster's New World Dictionary, Third College Edition (Simon & Schuster, Inc. 1988).

[6] That the medial and lateral heel tubes 26 are also integrally connected to upper and lower plates or surfaces does not dissuade us from this position.

CONCLUSION

To summarize, in this decision, we have:

sustained rejection (1) as to claims 4, 21, 24 and 25 and reversed rejection (1) as to claims 5, 17, 23 and 26-31;

sustained rejection (2); and

sustained rejection (3) as to claims 13-15 and reversed rejection (3) as to claims 4, 5, 21, 23-26 and 28-30.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

NEAL E. ABRAMS Administrative Patent Judge	)
LAWRENCE J. STAAB Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
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